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EXAMINER

ZHAO, XIAO SI

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/588,213  
Filing Date: August 02, 2006  
Appellant(s): AYDIN ET AL.

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Harris A. Pitlick  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 8/2/2010 appealing from the Office action mailed 9/2/2009.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims 1-11 have been canceled.

Claims 12-24 are pending.

Claims 12-24 stand rejected.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being

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maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION." Furthermore, it appears that Appellants are conceding the rejection of claims 12-17, 20 and 24.

Examiner respectfully request that the rejection of aforementioned claims be affirmed.

### **(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

### **(8) Evidence Relied Upon**

GB 1276381	Hughes et al.	8-1979
US 2003/0134093	Kitamura et al.	7-2003
US 6,485,898	Yoshioka et al.	11-2002
US 5,254,661	Wilson	10-1993

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 12-13 and 15-17 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hughes et al. (GB 1276381).**

Per independent claim 12:

Hughes et al. teach a method of applying two liquid coating compositions (pg. 6, 34-36) in the form of a dispersion (pg. 7, 4-8) on a substrate such as a web (page. 3, 109-112). The composition contains synthetic polymers such as polyvinyl alcohol (page 7, 130). The number of individual layers may range from two to as many as ten or more (pg. 7, 53-56) and the flowable media are applied using a cascade die (see Fig. 1, 6, 7, and 8). Example 13 shows a multilayer that has different chemically flowable media (pg. 14, example 13). Example 17 shows a two-layer coating wherein the top layer has  $103 \text{ g/m}^2$  and the bottom layer has  $21.6 \text{ g/m}^2$  (pg. 14, example 17). It is clear that the total amount applied is between  $2 \text{ g/m}^2$  to  $200 \text{ g/m}^2$  and that the ratio of the thickness between the top and bottom layer also falls between 0.1 to 100.

Per claim 13, the composition contains synthetic polymers such as polyvinyl alcohol (page 7, 130 to page 8, 1). It is known that polyvinyl alcohol has inherent adhesive properties and therefore the composition functions as an adhesive material.

Per claim 15, the support (substrate) that can be utilized are of film base, paper, polymeric film, and etc. (pg. 8, 7-23).

Per claim 16, an adhesion promoting layer is used (page 7, 43-46).

Per claim 17, since the compositions are simultaneously applied to the substrate, it meets the definition of applying it in "one pass".

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Per claim 20 the photographic layers can be materials such as silver halides (metal complex) and the layer can contain colloids such as synthetic polymers (pg. 7, 114-130).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al. (GB 1276381) in view of Kitamura et al. (US 2003/0134093).**

Per claim 14, Hughes et al. teach all the limitations of claim 12 but fail to teach that the substrate is a composite or high-gloss film.

Kitamura et al. teach that in forming photographic images, ink receiving layers are used ([0060]) and the ink receiving layers can be high-gloss films ([0083]).

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It would have been obvious to a skilled artisan to apply the flowable media, as taught by Hughes et al., onto a high-gloss film, as taught by Kitamura et al. One would have been motivated to do so because since Hughes et al. teach a method of applying photographic elements to a substrate, a skilled artisan would use a known film used in photographic manufacturing such as high-gloss film as a media receiver, or a substrate, to achieve certain aesthetic results with the final photographic product.

**6. Claims 18-19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al. (GB 1276381) in view of Yoshioka et al. (US 6485898).**

Hughes et al. teach all the limitation of claim 12, and further teach that the method can be utilized to coat any material or mixture of materials which can be put in liquid form (pg. 7, 3-10); various surfactants can be used to modify surface tension and coatability of the photographic coating such as anionic and non-ionic surfactants (pg. 8, 23-40); and the reference expresses the desirability for substantially no intermixing between adjacent layers to achieve good separation between the layers (pg. 3, 3-12).

Hughes et al. does not teach the photographic composition can contain aqueous solutions of polymers, layering of cationic and anionic polymers, the composition contain polyisocyanate, polyepoxides, or polyacrydines, the composition are applied as individual layers such as styrene-butadiene dispersions, acrylate, ethylene, vinylacetate dispersions, polyurethane dispersions, wax emulsions, or silicone emulsions are used

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as release coat layers, and a first thin layer servers to improve wettability on the release coat.

Yoshioka et al. teach a photographic composition/material.

Per claims 18-19, Yoshioka et al. teach that a polymer dispersible in an aqueous solvent is particularly preferred as the photographic composition (col. 23, 65-67) and that the dispersing agent can be anionic or cationic surfactants (col. 18, 31-46). Since the reference also teaches cationic with anionic dispersions, the layering would also tend toward gelling or coagulation. In addition, since the layers are eventually dried, the drying is also considered as a type of gelling.

Per claim 21, Yoshioka et al. teach that a hardening agent may also be added such as polyisocyanate to the composition (col. 39, 28-38).

Per claim 22, Yoshioka et al. teach that the polymers may be crosslinked (col. 24, 5-8). A crosslinking agent may be used (col. 26, 5-7).

Per claim 23, Yoshioka et al. teach styrene/butadiene copolymer latex can be used in the composition (col. 25, 38-50), dispersions such as acrylates, ethylene, acrylic acid, can be used, for example as an intermediate layer (col. 49, 53-58), wax emulsion can also be used (col. 69, 48-50). While Yoshioka et al. does not specify that the wax emulsion can be used as a release coat, it is well known in the art that release coats are used to prevent unwanted adhesion between layer and substrates during high temperatures, and thus, it would have been obvious to use the wax emulsion as the release coat so a more desirable multilayer photographic coating can be achieved on a substrate.



It would have been obvious to one of ordinary skill in the art at the time of the invention to use the photographic composition/material taught by Yoshioka et al. as the composition in Hughes et al. because both references deal with photographic composition and Hughes et al. recites that the method can be utilized to coat any material or mixture of materials which can be put in liquid form (pg. 7, 3-10). In addition, choosing and manipulating various chemical compounds, surfactants (cationic or anionic), and using different dispersions as layers will be obvious to the ordinary artisan in order to achieve a desirable final multilayer because Hughes et al. express the desirability for substantially no intermixing between adjacent layers to achieve good separation between the layers (pg. 3, 3-12). The purpose of the different compounds and surfactants, in the instant application and references, are to achieve the same effect of good layer separation and no intermixing.

**7. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al. (GB 1276381) in view of Yoshioka et al. (US 6485898) and further in view of Wilson (US 5254661).**

Hughes et al. in view of Yoshioka et al. teach all the limitations of claim 23. The references fail to teach that a first thin layer is deposited to improve the wettability of the release coat.

Wilson teaches that a wash coat can be used to improve the wettability of the release coating (col. 3, 60-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a wash coat (reads on “a first thin layer”), as taught by Wilson, as a first thin layer to improve the wettability of the release coat as taught by Hughes et al. in view of Yoshioka et al. because this is the combination of two known methods to achieve a predictable result (improved wettability). One would want to improve the wettability of the release coat because it is desirable for the release coat to have a strong contact with the first layer and thus, the substrate that the first layer is coated on, to improve the overall integrity of the multi-layer. .

**(10) Response to Argument**

1. Appellants argue that Hughes et al. do not disclose or suggest the limitation in the present claims of a multilayer application ranging from  $2 \text{ g/m}^2$  to  $200 \text{ g/m}^2$  and having a ratio of layer thickness that ranges from 0.1 to 100. This argument is not persuasive. As stated in the previous Office Action, Hughes et al. disclose a two-layer coating wherein the top layer has  $103 \text{ g/m}^2$  and the bottom layer has  $21.6 \text{ g/m}^2$  (pg. 14, example 17). It is clear that the total amount applied is between  $2 \text{ g/m}^2$  to  $200 \text{ g/m}^2$  and that the ratio of the thickness between the top and bottom layer also falls between 0.1 to 100.
2. Per claim 18, Appellants argue that there is no disclosure or suggestion in Yoshioka et al. that would motivate one of ordinary skill in the art to practice an embodiment of depositing plural numbers of layers onto a substrate from a multi-film forming applicator device where two material layers are such that, when normally placed into contact with each other, tend to gel or coagulate. This argument is not

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persuasive. Claim 18 was rejected on a combination of references (Huges/Yoshioka).

One cannot show unobviousness by attacking references individually when the rejection was based on a combination of references. In addition, since the references teach cationic with anionic dispersions, the layering would also tend toward gelling or coagulation. Furthermore, since the layers are eventually dried, the drying is also considered as a type of gelling.

3. Per claims 18, 19, and 21-23, Appellants argue that Yoshioka et al. does not suggest separate layers of anionic and cationic polymers as in claims 18 and 19 nor disclose or suggest two flowable media for the materials recited in claims 21-23. As mentioned above, one cannot show unobviousness by attacking references individually when the rejection was based on combination of references.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Xiao S Zhao/

Examiner, Art Unit 1714

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